DEPARTMENT of ENVIRONMENTAL SERVICES Water Division - Watershed Management Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

| Lake: ROUND POND | Lake Area (ha): | 40.47 |
|------------------------------------|------------------------------------|----------|
| Town: BARRINGTON | Maximum depth (m): | 6.2 |
| County: Strafford | Mean depth (m): | 2.8 |
| River Basin: Coastal | Volume (m³): | 1132000 |
| Latitude: 43°16'34" N | Relative depth: | 0.9 |
| Longitude: 71°02'41" W | Shore configuration: | 1.52 |
| Elevation (ft): 391 | Areal water load (m/yr) |): 2.06 |
| Shore length (m): 3400 | Flushing rate (yr ⁻¹): | 0.70 |
| Watershed area (ha): 176.1 | P retention coeff.: | 0.81 |
| <pre>% watershed ponded: 0.0</pre> | Lake type: natura | al w/dam |

| BIOLOGICAL: | 27 July 1999 |
|------------------------------------|------------------|
| DOM. PHYTOPLANKTON (% TOTAL) #1 | ASTERIONELLA 75% |
| #2 | TABELLARIA 10% |
| #3 | MALLOMONAS 5% |
| PHYTOPLANKTON ABUNDANCE (units/mL) | |
| CHLOROPHYLL-A (µg/L) | 2.61 |
| DOM. ZOOPLANKTON (% TOTAL) #1 | KERATELLA 57% |
| #2 | KELLICOTTIA 15% |
| #3 | |
| ROTIFERS/LITER | 117 |
| MICROCRUSTACEA/LITER | 36 |
| ZOOPLANKTON ABUNDANCE (#/L) | 154 |
| VASCULAR PLANT ABUNDANCE | Scat/Common |
| SECCHI DISK TRANSPARENCY (m) | 4.2 |
| BOTTOM DISSOLVED OXYGEN (mg/L) | 1.2 |
| BACTERIA (E. coli, #/100 ml) #1 | |
| #2 | |
| #3 | |

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m): 4.5 Hypolimnion volume (m³): None Anoxic volume (m³): None

| CHEMICAL: | ROUND POI | | |
|--------------------------|-----------|-----------|--------|
| | 27 3 | July 1999 | |
| DEPTH (m) | 2.0 | | 4.0 |
| pH (units) | 6.0 | | 5.7 |
| A.N.C. (Alkalinity) | 1.1 | | 1.2 |
| NITRATE NITROGEN | < 0.05 | | < 0.05 |
| TOTAL KJELDAHL NITROGEN | 0.24 | | 0.22 |
| TOTAL PHOSPHORUS | 0.006 | | 0.008 |
| CONDUCTIVITY (µmhos/cm) | 36.7 | | 37.0 |
| APPARENT COLOR (cpu) | 11 . | | 14 |
| MAGNESIUM | 0.54 | | |
| CALCIUM | 1.7 | | |
| SODIUM | 3.6 | | |
| POTASSIUM | 0.50 | | |
| CHLORIDE | 5 | | 5 |
| SULFATE | 4 | | 4 |
| TN : TP | 40 | | 28 |
| CALCITE SATURATION INDEX | 5.0 | | |

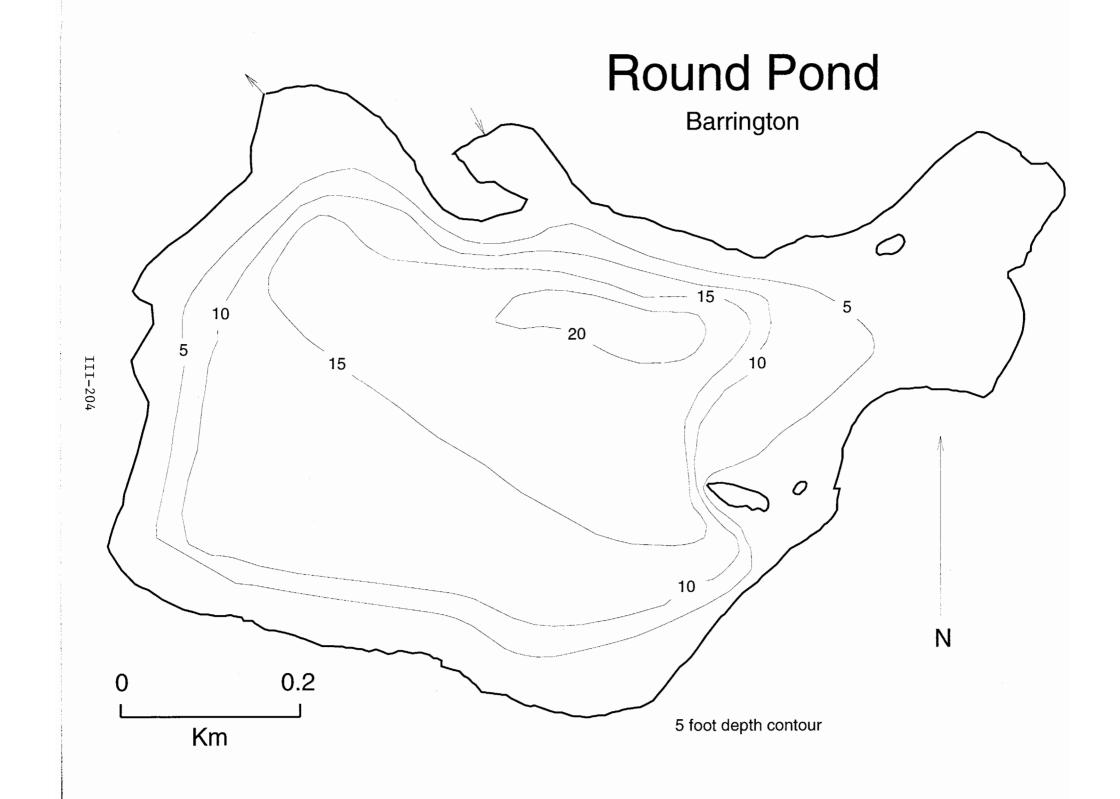
All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1999

| D.O. | S.D. | PLANT | CHL | TOTAL | CLASS |
|------|------|-------|-----|-------|--------|
| ** | 2 | 2 | 0 | 4 | Oligo. |

COMMENTS:

- 1. This is the public water supply for the City of Rochester. Boating, fishing and swimming are prohibited.
- 2. This is sometimes called Rochester Reservoir, but it is a separate waterbody that flows into Rochester Reservoir (as named on the USGS topographical map).
- 3. The pond was not sampled in the winter because of thin ice.
- 4. The pond had two thermal layers, an epilimnion and metalimnion, but no hypolimnion (see discussion on page II-8).



FIELD DATA SHEET

LAKE: ROUND POND DATE: 07/27/1999 TOWN: BARRINGTON

WEATHER: Partly Cloudy, Breezy, Warm

| Biii 07, 27, 1333 | | and raidly diday, biddly, warm | | |
|---|-----------|--------------------------------|----------------------|--|
| DEPTH (M) | TEMP (°C) | *DISSOLVED OXYGEN | OXYGEN SATURATION | |
| 0.1 | 26.7 | 7.5 | 94 % | |
| 0.5 | 26.4 | 7.6 | 94 % | |
| 1.0 | 26.1 | 7.6 | 93 % | |
| 1.5 | 26.0 | 7.5 | 93 % | |
| 2.5 | 25.8 | 7.5 | 92 % | |
| 3.0 | 25.7 | 7.4 | 91 % | |
| 3.5 | 25.5 | 7.0 | 86 % | |
| 4.0 | 23.5 | 5.4 | 64 % | |
| 4.5 | 20.9 | 2.6 | 30 % | |
| 5.0 | 18.0 | 1.4 | 15 % | |
| 5.5 | 15.8 | 1.4 | 14 % | |
| 6.0 | 14.2 | 1.1 | 11 % | |
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SECCHI DISK (m): 4.2 COMMENTS:

BOTTOM DEPTH (m): 6.2

TIME: 1234

*Dissolved oxygen values are in mg/L

AQUATIC PLANT SURVEY

LAKE: ROUND POND TOWN: BARRINGTON DATE: 07/27/1999 PLANT NAME Key ABUNDANCE **GENERIC** COMMON U Utricularia Bladderwort Common M Myriophyllum Native milfoil Common W Potamogeton Pondweed Scattered N Nymphaea White water lily Sparse Spongilla g Freshwater sponge Y Nuphar Yellow water lily Sparse

OVERALL ABUNDANCE: Scat/Common

GENERAL OBSERVATIONS:

- 1. Water level down about 3 1/2 feet.
- 2. Canadian geese, one loon, a family of mallards and two great blue herons were observed. Numerous smallmouth bass were seen.